



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,392	07/14/2003	Hans-Ulrich Zuehlke	GK-OEH-160 / 500814.20062	7681
7590 08/12/2005			EXAMINER	
Gerald H. Kiel, Esq. REED SMITH, LLP 599 Lexington Avenue New York, NY 10022-7650			HARAN, JOHN T	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,392

Applicant(s)

ZUEHLKE ET AL.

Examiner

John T. Haran

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/14/03, 1/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 7/14/03 and 1/20/04 have been considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gillner et al (DE 1005916 A1) in view of Murar et al (U.S. Patent 6,579,402) and Kobayashi et al (US 2002/0108707 A1).

Gillner et al teaches a method for joining plastic structural components by means of laser radiation wherein a thin-walled plastic structural component for an automobile body part having a quality surface and being absorbent of laser radiation is formed and a second plastic structural part which is transparent to laser is welded to the side of the thin-walled plastic structural component that is opposite the quality surface by transmission radiation laser welding (See specification page 1, line 22 to page 2, line 20). Gillner et al is silent towards heating the transparent plastic structural component before welding in order to reduce the temperature gradient between the components and to melt the transparent plastic structural component faster.

It is generally well known in the welding art when joining plastic components, one of which has a quality or "Class A" surface to avoid damage to the quality or "Class A" surface, as shown for example in Murar et al. Murar et al teach that overheating when bonding plastic components of automotive interior parts that have a "Class A" surface can cause unwanted marring, burning, or warpage of the "Class A" surface (Column 12, lines 37-65). Accordingly one skilled in the art would have readily appreciated minimizing the amount of heat generated in the thin-walled plastic structural component in the method of Gillner et al in order to avoid damaging the quality surface.

It is also generally well known in the welding and bonding art to avoid the problems associated with welded and bonded components having different coefficients of thermal expansion by preheating one of the components in order to reduce the temperature gradient, as shown for example in Kobayashi et al. Kobayashi et al teaches using infrared transmission heating along with preheating in order to reduce the temperature gradient between the components to be joined and to effect a more efficient heating (See abstract and paragraphs 0060-0062). Accordingly one skilled in the art would have readily appreciated preheating the transparent plastic structural component in the method of Gillner et al in order to reduce the temperature gradient with the added benefit of heating the transparent plastic structural component quicker to effect a more efficient melting and welding of the components.

One skilled in the art looking at the prior art as a whole would have readily appreciated the problems associated with large temperature gradients and the potential of damage to a quality surface from overheating. Furthermore, one skilled in the art

Art Unit: 1733

would have readily recognized that preheating the transparent plastic structural component would reduce the temperature gradient, quicken the heating and melting to the transparent component such that the absorbent component need not absorb as much laser and thereby avoids being overheated and unnecessarily expanded to the point of damaging the quality surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to preheat the transparent plastic structural component part before welding in the method of Gillner in order to reduce the temperature gradient, quicken the melting of the transparent plastic structural component part, and limit the thermal expansion of the absorbent plastic structural component part as suggested by the prior art as a whole.

Regarding claims 2 and 3, one skilled in the art would have readily appreciated using a separate heat source, such as a laser at a different wavelength at which the transparent component absorbs laser radiation, in the method of Gillner et al and it would have been obvious to do so.

Regarding claims 4 and 5, it is conventional for transmission laser welding to be carried out at the near infrared radiation wavelength and it would have been obvious to do such in the method of Gillner et al.

Regarding claims 6 and 7, Gillner et al teaches the transparent part serves as a reinforcer or fastener (Specification, page 1, lines 25-27).

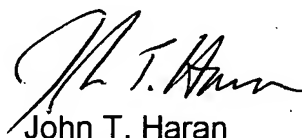
Art Unit: 1733

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John T. Haran whose telephone number is (571) 272-1217. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John T. Haran
Primary Examiner
Art Unit 1733